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Medical Director's Update for Base Station Physicians' Committee
June, 2007

San Diego County EMS:

EMS: Marcy Metz is the interim EMS Chief. Marcy needs no introduction and we are enthused to have her in this role. Carmel Angelo left EMS to assume the position of Director of Health and Human Services for Mendocino County. We wish her well and thanks for all her hard work over the last several years on behalf of the EMS system. A recruitment will be held for the permanent chief. There are other openings at EMS if you are interested.

PPRs for Hospitals: The trauma surgeons have asked that a PPR be available in the hospital for every patient. This is important. Despite an excellent turnover report to hospital staff, the potential for major problems arises when something is recorded on the PPR and not addressed by the physician. Issues that seemed straightforward at turnover can be less clear even a short time later, and nurses and physicians will want to consult the PPR. Also, consultants see patients later after they are admitted and these physicians need the PPR to understand what happened in the field. Field personnel frequently believe the hospital doesn't value their information enough. This is a situation where hospital personnel truly need and want written information. Thanks for making this happen.

New Protocols: These will take effect in July. Rebecca Pate or I would glad to answer any questions about the protocols.

Nitrates in CHF: Sequential administration of nitrates is effective, and blood levels of nitrates may approach those achieved by IV administration. The key is to continue administration in a patient who needs additional treatment and maintains an adequate blood pressure. It is better to treat with multiple individual doses rather than relying on nitropaste.

STEMI Update: Door-to-balloon times continue to look good and the system is meeting expectations to this point, with about 80% within 90 minutes. We hope to get out a first quarter report in the near future.

We continue to see some overtriage and unnecessary activations that may be avoidable. A recent report from Los Angeles outlined their experience with the predictive value of field EKGs. They point out that overuse of field ECGs in low risk populations increases the number of false positive ECGs. There is also a deterioration of specificity due to artifact that is machine specific. They reported the positive predictive value (PPV) of field ECGs was 66%. If the patient had chest pain the PPV was 74%. The PPV of the field ECG without a complaint of chest pain was 25%.

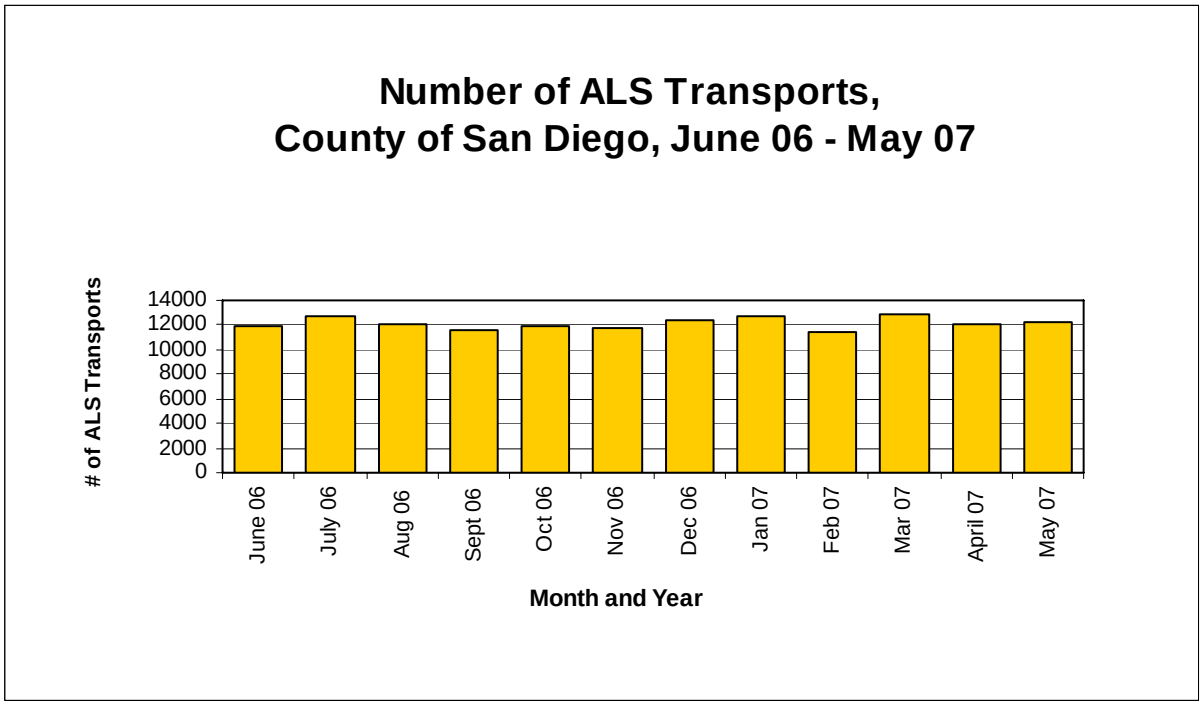
We are performing large numbers of ECGs on patients without chest pain and should be careful to think about who really needs one. An ECG is not part of some "routine" workup. The patient with an atypical presentation found to have a STEMI upon arrival at the hospital can receive a thrombolytic or be transferred.

If the ECG has artifact and doesn't look clean in all leads, the base should be told. If a known cause of a false positive ECG is present, that should be reported as well. Paced rhythms and left bundle branch block clearly are usually false positive. Atrial flutter or rapid atrial fibrillation, left ventricular hypertrophy, bundle branch blocks should be reported. Patients who do not have Acute MI on their tracing should not be triaged as a STEMI patient. Patients who have Acute MI on the ECG interpretation, but have a reason for a false positive may be triaged to an SRC in some cases, but the SRC need not activate the team, allowing the ED physician to decide if activation is needed immediately after arrival.

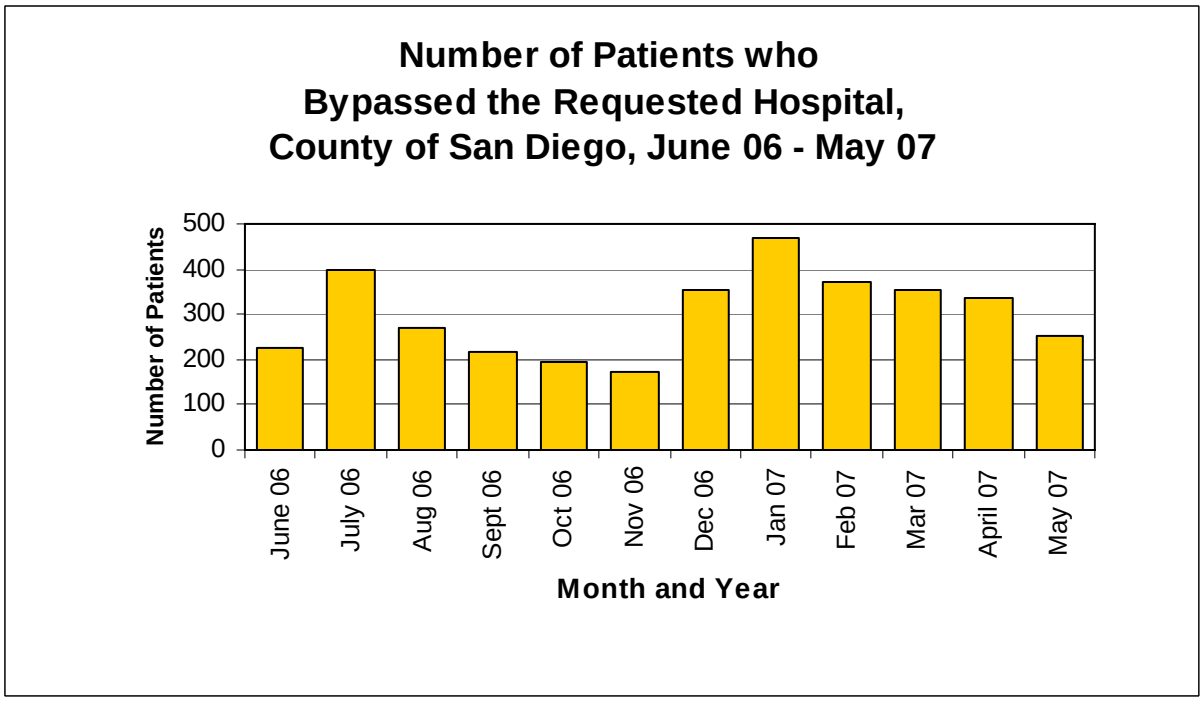
Another issue, although less pressing, is the common report of ST elevation on the monitor interpretation in QCS patient care records. This is the reading from lead II monitoring, not the 12-lead. ST elevation is recorded frequently. Almost always, the 12-lead performed does not show a STEMI. These are erroneous and ST elevation virtually never should be recorded on the lead II interpretation; that is intended for rhythm interpretation. The reason monitors show ST elevation when it doesn't exist is due to the frequency response characteristics of monitors compared to 12-leads. For a review of the issue, look back to the September 1997 issue of JEMS (author S. O'Grady).

Taser issues: EMS is looking at this. Taser discharges by themselves are not considered to be dangerous. Patients with agitated delirium, who frequently have taken stimulants, are at risk of sudden death. Hyperthermia is a sign of high risk for death. If a patient with agitated delirium needs to be restrained, it should be done, if possible, without pressure on the chest or abdomen that impairs ventilation. The patient needs to be observed carefully and have ventilation and circulation quickly supported as needed. A base deviation for sedation with midazolam will be indicated in some cases.

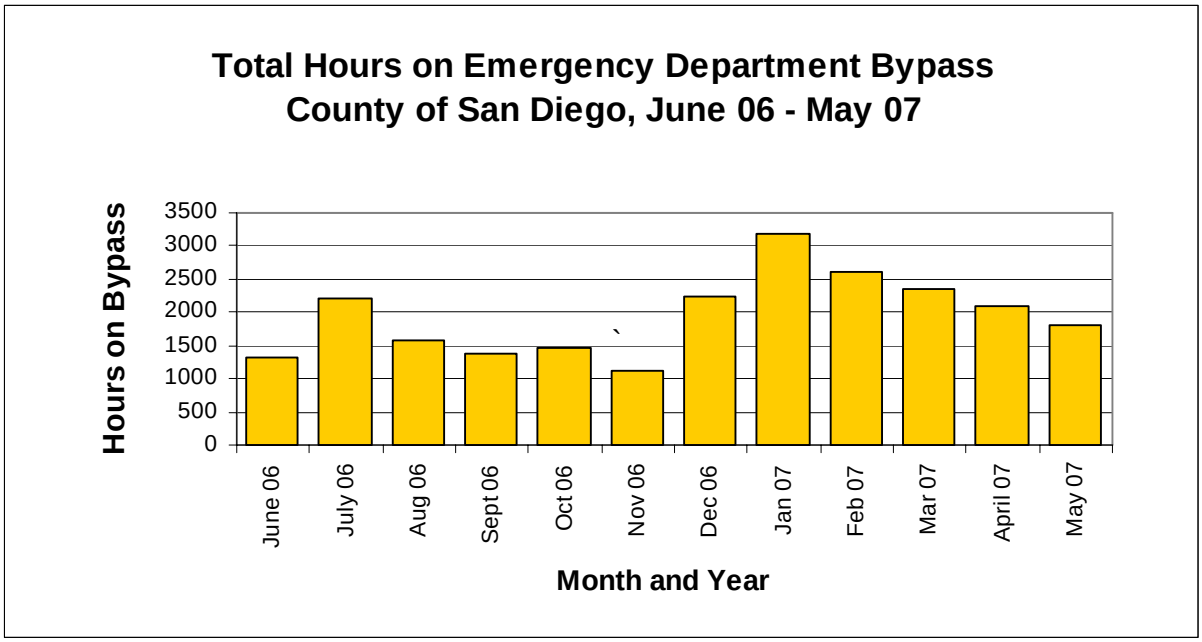
Below are the patient destination data in graphic form:



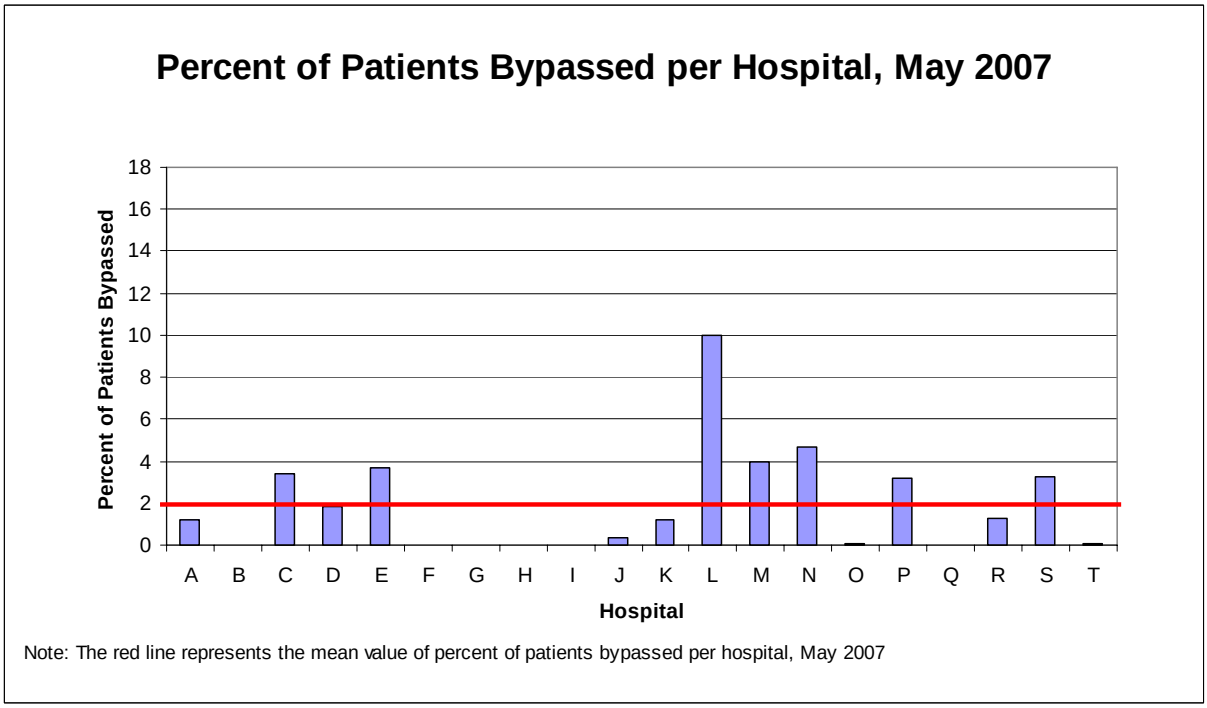
Source: County of San Diego, Health and Human Services Agency, Division of Emergency Medical Services, MICN Records, Jun 2006 – May 2007 Note: Numbers based on Run Outcomes of Transport by Unit and Transport by Other



Source: County of San Diego, Health and Human Services Agency, Division of Emergency Medical Services, MICN Records, Jun 2006 – May 2007 Note: Numbers based on Run Outcomes of Transport by Unit and Transport by Other



Source: County of San Diego, Health and Human Services Agency, Division of Emergency Medical Services, MICN Records, May 2006 – May 2007



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